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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,552	12/05/2001	Gary Jennings	BR8669	7086

7590 09/08/2005

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EXAMINER

SAETHER, FLEMMING

ART UNIT	PAPER NUMBER
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3677

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/004,552	JENNINGS ET AL.	
	Examiner	Art Unit	
	Flemming Saether	3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 13-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 13-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Objections

Claims 1 and 16 are objected to because of the following informalities: in each of claims 1 and 16, at the end of paragraph c. "the blind end" should be --a blind end-- for proper antecedent. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-9 and 13-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the claims, it is unclear what applicant intends to be the radial cross-section and direction because a radius is simply a line extending from the axis which can define an infinite number cross-sections and in regards to direction it is not seen where there is a surfaces located radially between the indentations (claims 3 and 16). The claims were examined as best understood.

Claim Rejections - 35 USC § 102

Claim 16 is rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Smith (EPO 1 030 069). Smith discloses a rivet comprising a mandrel (4) having a frangible portion (not labeled) and a shell (2) having a flange (6) with a first (12) and second (14) sets of indentations along the shell spaced from the flange. As seen in Fig. 2, each of the indentations are arch

shaped when viewed in "radial" cross-section and include a surface (16) between the indentations defined by sloping edges with a mid portion there between.

Claim Rejections - 35 USC § 103

Claims 1 and 3 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Smith (EPO 1 030 069). Smith discloses a rivet comprising a mandrel (4) having a frangible portion (not labeled) and a shell (2) having a flange (6) with a first (12) and second (14) sets of indentations along the shell spaced from the flange. As seen in Fig. 2, each of the indentations are arch shaped when viewed in "radial" cross-section and include a surface (16) between the indentations defined by sloping edges with a mid portion there between. Smith discloses the indentation formed by rolling which inherently would localized hardened area but, Smith is silent as to the amount of hardening but since the amount of deformation is about the same as that of the instant invention the amount of hardening would also be within the range as claimed. Alternatively, the amount of hardening would have been obvious for optimized manufacture and deformation.

Claims 2, 4-9 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith as applied to claim 1 above, and further in view of Lacey (US 4,958,971). Lacey teaches a rivet including a third indentation. At the time the invention was made, it would have been obvious for one of ordinary skill in the art to provide Smith with a third set of indentations as taught in Lacey in order to better control

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the deformation characteristics of the rivet for overall superior performance. The specific dimensions would have been recognized depending upon the particular use of the rivet. Also, the rivet of modified Smith would be capable of use in combination with the workpiece components as claimed.

Claims 1-9 and 13-16 are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Lacey (US 4,958,971) in view of Gossmann (US 5,469,140). Lacey discloses a rivet comprising a mandrel (13) having a frangible portion (19) and a shell (11) having a flange (16) with a first (27), second (28) and third (29) indentations along the shell spaced from the flange. Lacey discloses the indentations to be arc shaped however they are not non-continuous. Gossmann discloses a rivet having a shell with sets of indentations (11, 12) wherein the sets are non-continuous. At the time the invention was made, it would have been obvious for one of ordinary skill in the art to form the indentations of Lacey in to non-continuous sets as disclosed in Gossmann in order to provide for a higher strength rivet connection. As discussed in Grossmann's Summary of the Invention the non-continuous sets of indentations lead to less material attenuation and thus a stronger rivet connection.

Response to Remarks

Applicant initially notes that language suggested by the examiner has been incorporated into the claims. In response, while the applicant adopted some of the

examiner's suggestion, modifications were made thereto with the inclusion of the "radial cross section" which was not suggested.

Applicant argues the instant invention defies over Smith and Grossmann and any combination thereof since in the instant invention the indentation are "crimped" on the sleeve while in Smith and Grossman they are respectively "rolled" and "embossed". In response, the applicant is reminded that in article claims, the process by which is product is made is of no consequence; all that is of considered for patentability is the final product. With this in mind each of the "crimped", "rolled" and "embossed" are all terms meaning the sleeve is plastically deformed by compressing the material to form the indentation thus all would also provide a all localized hardening resulting in the same final product. Indeed, "embossed" is simply a broad term encompassing both "rolled" and "crimped" where "rolled" and "crimped" are well known different modes of manufacture which again, are of no consequence in the resultant final product.

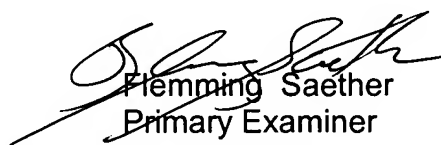
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Flemming Saether whose telephone number is 571-272-7071. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Swann can be reached on 571-272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Flemming Saether
Primary Examiner
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